

Rovimix® Hy ACE

STAND OUT! - In Full Colour

A highly efficient antioxidant and pigmentation solution that improve shrimp's colour score

**ANIMAL
NUTRITION
AND HEALTH**

ESSENTIAL
PRODUCTS

PERFORMANCE
SOLUTIONS +
BIOMIN®

PRECISION
SERVICES



DSM

BRIGHT SCIENCE. BRIGHTER LIVING.

STAND OUT!

Rovimix® Hy ACE



Keeping Up With the Colour

The culture conditions are one of the key factors in determining the pigments' availability in the cultured shrimp. Culture systems with open ponds that are operated at low and semi-intensive levels can provide adequate levels of carotenoids to the cultured shrimp compared to production systems that operate at high density.

Under an intensive culture regime, the natural productivity in the production system is not able to provide the shrimp with sufficient levels of carotenoids, especially when the shrimp have reached certain biomass. Therefore, to achieve the desired colour score, the farmers or the buyer need to supplement the feed with the right level of carotenoids.

Colour & Immunity

Dark coloration relates to healthy shrimp. The efficacy of the immune system, which is the primary line of defense, is dependent on an adequate supply of nutrients and vitamins for maintaining biological processes and optimal growth, improving immunity and disease resistance of the animals. Among all vitamins, vitamin D3, and its metabolite 25OHD3, vitamin E, and vitamin C have been shown to strengthen immunity and health. Moreover, antioxidants like vitamins C and E are scientifically proven to slow down oxidation processes, extend shelf life, and reduce spoilage and waste in post-harvest phases, including storage, processing, and distribution.

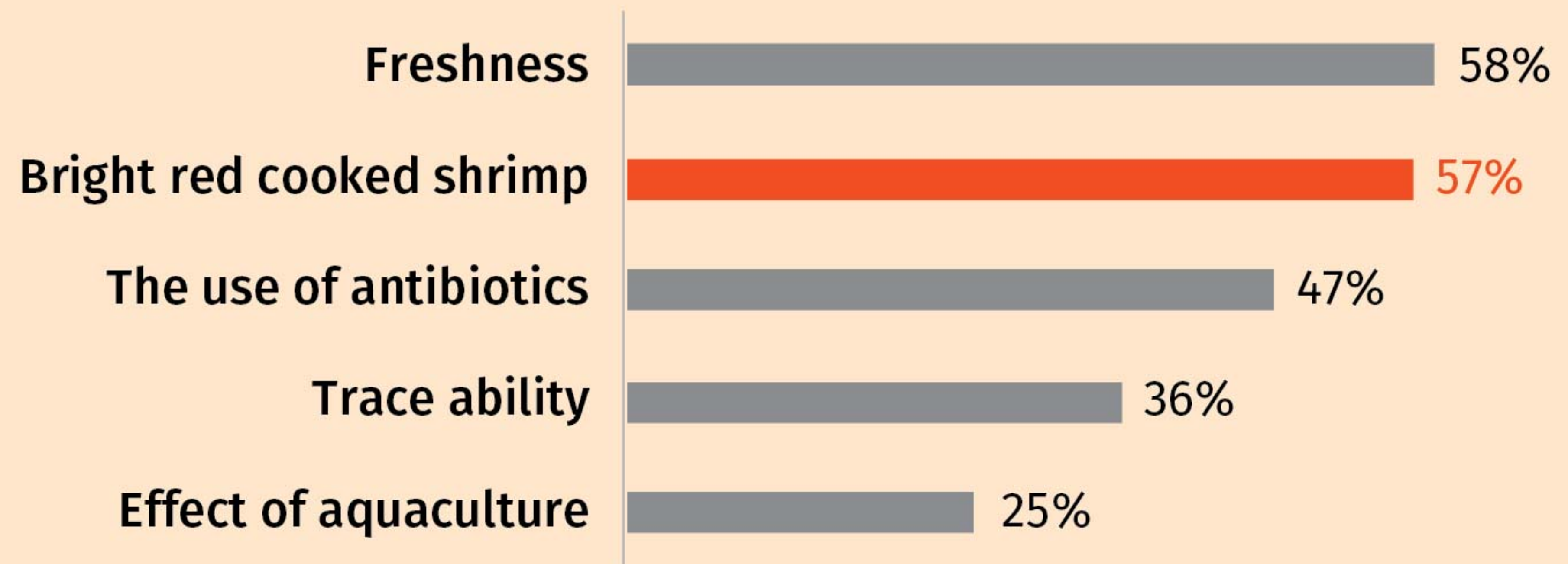
Consumers are willing to pay extra value for shrimp with better quality, appearance, and colour.

Enhance Pigmentation

Consumers have shown to value and consider the degree of coloration in shrimp when making a purchase. In typical farming conditions, shrimp have limited access to astaxanthin, which naturally imparts shrimp with their red color. To address consumer demand and expectations, dietary supplementation of astaxanthin is required. CAROPHYLL Pink®, with over 25 years of success, is the standard astaxanthin source for bright red shrimp.



Chinese Consumer Criteria in Purchasing Shrimp



Retail studies clearly indicate that Chinese consumers use color as a key purchasing criterion besides freshness. Also, consumers relate darker pigmented shrimp with freshness and health.

Stress Mitigation

Supplementation of vitamin C and E can significantly impact the modulation of the immune response and strengthen the defensive mechanisms of shrimp, therefore improving stress tolerance and resistance against disease and toxins by increasing antioxidant functionality.

Vitamin C and E are crucial in farmed shrimp. Shrimp are unable to synthesize these vitamins themselves, so they must be obtained through their diets for :

- Growth and development
- Reproduction
- Resistance to disease and immune system response
- Lessen stress
- Wound healing
- Strong antioxidant properties

Regulate Healthy Molting

Vitamin D regulates calcium absorption and phosphate metabolism in the shrimp gut. Calcium and phosphorus are essential components of the shrimp exoskeleton. Vitamin D efficiency can also be responsible for issues with the hardening of the new exoskeleton. To grow in size, shrimp undergo molting, a cyclic metabolic and physiological process that shrimp need to shed and replace their old exoskeletons and synthesize a new one. The molting process is frequently repeated during the life cycle. With every molt, a shrimp doubles or triples its body size.

Collagen covers all joints and connects these exoskeleton parts into flexible and strong body armor. With no internal skeletal elements, collagen structures are also found internally to support internal organs and tissues. The quality and strength of the collagen are dependent on adequate vitamin C intake for collagen synthesis.

Product Characteristics :

The product contains CARPPHYLL® PINK 10% CWS, Vitamin C and E, including HyD

- Astaxanthin \geq 15,000ppm
- Vitamin C \geq 125,000ppm
- Vitamin E \geq 150,000ppm
- Application flexibility for feed mill or on-farm uses
- Product support: Industry-leading technical, regulatory, and analytical backing readily available
 - o ShrimpFan™ Lineal – Developed in 2021 to objectively and quickly evaluate shrimp color
 - o Global cross-functional DSM aquaculture team with local positioning



Rovimix® Hy ACE

Benefits :

✓ Enhance shrimp pigmentation

CAROPHYLL Pink® is the standard astaxanthin source for bright red shrimp

✓ Promote molting health

Hydroxy-D promotes calcium absorption and phosphate metabolism for quicker hardening of the new exoskeleton, while vitamin C supports collagen synthesis for internal organs and tissues

✓ Provide antioxidant effects

Vitamin C and E improving immune activity and antioxidant capacity

✓ Improve oxidative stress resistance

Vitamin C protects cell from reactive oxygen species (ROS) during oxidative burst, while vitamin E strengthen cell membranes from oxidative stress

Dosage & Mixing Instruction :

- 1) Mix 2g of ROVIMIX® Hy ACE / kg of feed with 10ml of clean freshwater or a good quality fish oil
- 2) Top-dress the pellets evenly with the ROVIMIX® Hy ACE mixture.
- 3) Let the pellets absorb the ROVIMIX® Hy ACE mixture under shade between 30 minutes - 2 hours before feeding.

Storage : Avoid direct sunlight. Store in a cold and dry place. Once opened, the product should be used and immediately.

Shelf life : 12 months from the date of manufacture.

For targeted application : Use 3kg/MY feed for 7-14 days before harvest or use 2kg/ MT feed for 10-14 days before harvest.

Packaging: 1kg foil

Recommendation:

Formulate ROVIMIX® Hy ACE into aquaculture feeds according to the chart below :

Fish & Shrimp Feeding Recommendations

Species	ROVIMIX® Hy ACE
	Addition rate of product per kg of feed
White shrimp	2 - 4 g
Black tiger	1 - 3 g

For more information,
contact your representative today.

www.dsm.com/anh

Follow us on:



BRIGHT SCIENCE. BRIGHTER LIVING.™

©DSM 2022

DISCLAIMER

DSM has used diligent care to ensure that the information provided herein is accurate and up-to-date, however, DSM makes no representation or warranty, either expressly or implied, of the accuracy, reliability, or completeness thereof. The information provided herein contains scientific and product information for business to business use and does not constitute or provide scientific or medical advice, diagnosis, or recommendation for treatment. Country or region-specific information should be considered when labeling or advertising to the final consumer. In no event shall DSM be liable for any damages arising from or reliance upon, or use of, any information provided herein. The content of this document is subject to change without further notice. Please contact your local DSM representative for further details. All trademarks listed in this document are either (registered) trademarks of, or trademarks licensed by, the DSM group of companies in the Netherlands and/or other countries, unless explicitly stated otherwise.



DSM

BRIGHT SCIENCE. BRIGHTER LIVING.

